

EXHIBIT H

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CLEMENT SETH ROBERTS (STATE BAR NO. 209203)
croberts@orrick.com
BAS DE BLANK (STATE BAR NO. 191487)
basdeblank@orrick.com
ALYSSA CARIDIS (STATE BAR NO. 260103)
acaridis@orrick.com
EVAN D. BREWER (STATE BAR NO. 304411)
ebrewer@orrick.com
ORRICK, HERRINGTON & SUTCLIFFE LLP
The Orrick Building
405 Howard Street
San Francisco, CA 94105-2669
Telephone: +1 415 773 5700
Facsimile: +1 415 773 5759

SEAN M. SULLIVAN (*pro hac vice*)
sullivan@ls3ip.com
COLE RICHTER (*pro hac vice*)
richter@ls3ip.com
LEE SULLIVAN SHEA & SMITH LLP
656 W Randolph St., Floor 5W
Chicago, IL 60661
Telephone: +1 312 754 0002
Facsimile: +1 312 754 0003

Attorneys for Defendant Sonos, Inc.

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

GOOGLE LLC,

Plaintiff and Counter-defendant,

v.

SONOS, INC.,

Defendant and Counter-claimant.

Case No. 3:20-cv-06754-WHA
Related to Case No. 3:21-cv-07559-WHA

**SUPPLEMENTAL OPENING EXPERT
REPORT OF DR. KEVIN C.
ALMEROOTH FOR "PATENT
SHOWDOWN"**

ordinary meaning of at least the following claim terms/phrases:

- “operating in a *standalone mode* in which the first zone player is *configured to play back media individually*” (see limitation 1.5);
- “a [given] indication that the first zone player *has been added* to a [given] zone scene” (see limitations 1.6-1.7); and
- “a [given] indication that the first zone player has been added to a [given] zone scene *comprising a [given] predefined grouping of zone players including at least the first zone player and a [given other] zone player* that are to be configured for synchronous playback of media when the [given] zone scene is invoked” (see limitations 1.6-1.7).

1. “Standalone Mode”

162. As set forth above, limitation 1.5 of the ’885 Patent includes the following claim language:

operating in a *standalone mode* in which the first zone player is *configured to play back media individually*.

163. While it is not clear, Google appears to be interpreting this “standalone mode” limitation to require that the “first zone player” be (1) engaging in *active* playback and (2) outputting audio in the form of *sound waves* from *built-in speakers*. See Google’s Fifth Suppl. Resp. to Sonos’s Interrog. No. 12 at 54; D.I. 249 at 20-24. If so, I disagree with both aspects of Google’s interpretation. In my opinion, Google’s position is not consistent with how a POSITA would interpret this “standalone mode” limitation in view of the intrinsic evidence. Instead, a POSITA would understand this “standalone mode” limitation to require the “first zone player” to be *operating in a mode for individual playback* (as opposed to a mode for grouped playback), which could be satisfied regardless of whether or not the “first zone player” is actually engaging in active playback and regardless of whether the “first zone player” is capable of outputting audio in the form of sound waves from built-in speakers or outputting audio in the form of an audio signal that is provided to connected, external speakers.

164. The plain language of claim 1 makes clear that “standalone mode” is a mode in which the “first zone player” is configured for individual playback as opposed to a mode in which the “first zone player” is configured for grouped playback. Claim 1 does so by, for example, explaining that the “first zone player” “transition(s)” from “operating in the standalone mode” in which the first zone player is “configured to play back media individually” to “operating in

1 accordance with the given one of the first and second predefined groupings” in which “the first
2 zone player is configured to coordinate with at least one other zone player in the given one of the
3 first and second predefined groupings of zone players over a data network in order to output media
4 in synchrony with output of media by the at least one other zone player in the given one of the first
5 and second predefined groupings of zone players.” *See* limitations 1.5 and 1.10. Thus, a POSITA
6 would understand that the “standalone mode” limitation refers to the “first zone player” operating
7 in a mode for individual playback, as contrasted from a mode for grouped playback.

8 165. Additionally, claim 1 does not equate “standalone mode” with the “first zone
9 player” being engaged in *active* playback of media. To the contrary, claim 1 equates “standalone
10 mode” with the “first zone player” being “*configured to play back media individually*,” and none
11 of the other language of claim 1 requires the “first zone player” to be engaged in active playback
12 while in “standalone mode.” Thus, based on the plain claim language alone, a POSITA would
13 understand that the “first zone player” operating in “standalone mode” may or may not be engaged
14 in active playback so long as the “first zone player” is “*configured to play back media individually*”
15 as opposed to being configured to play back media in synchrony as part of a group.

16 166. Moreover, neither the plain language of the “standalone mode” limitation nor the
17 other language of claim 1 recites anything about whether the “first zone player” has its own built-
18 in speakers or whether the “first zone player” must be capable outputting audio in the form of
19 sound waves. With respect to hardware components, claim 1 requires the claimed “first zone
20 player” to have “a network interface” (limitation 1.1), “one or more processors” (limitation 1.2),
21 and “a non-transitory computer-readable medium” with program instructions (limitations 1.3-1.4)
22 for performing the recited functions in limitations 1.5-1.10. And with respect to the claimed
23 functionality, claim 1 recites that the “first zone player” is configured to either “play back media
24 individually” or play back media as part of a “predefined grouping” by “output[ting] media” in
25 synchrony with output of media by the at least one other zone player” in the predefined grouping,
26 without imposing any limitation on the form of the audio that is output by the “first zone player”
27 as part of this playback functionality. Thus, based on the plain claim language alone, a POSITA
28 would understand that as long as an accused zone player is capable of operating in a mode in which

1 it is configured to play back individually as opposed to as part of a group – which can be
2 accomplished by processing and outputting audio in the form of sound waves from built-in
3 speakers or processing and outputting audio in the form of an audio signal that is provided to
4 connected, external speakers – the accused zone player will satisfy the “standalone mode”
5 limitation of claim 1.⁷

6 167. This interpretation of the claimed “standalone mode” is also supported by the
7 specification of the '885 Patent. For instance, the specification discloses that a “zone player”
8 does not have to be engaged in active playback when operating in “standalone mode.” As shown
9 below in Figure 7 of the '885 Patent, the “Living Room” zone player and the “Patio” zone player
10 are each operating in a standalone mode for individual playback as opposed to a mode for
11 grouped playback – as demonstrated by the fact that neither of the two “Zone Scenes” (or any
12 other groups that may include the “Living Room” and/or “Patio” zone players) are currently
13 activated for synchronous group playback – but the “Living Room” and “Patio” zone players are
14 also not engaged in active playback – as demonstrated by the fact that “play” buttons (as opposed
15 to, for example, “pause” or “stop” buttons) are shown for each zone player.

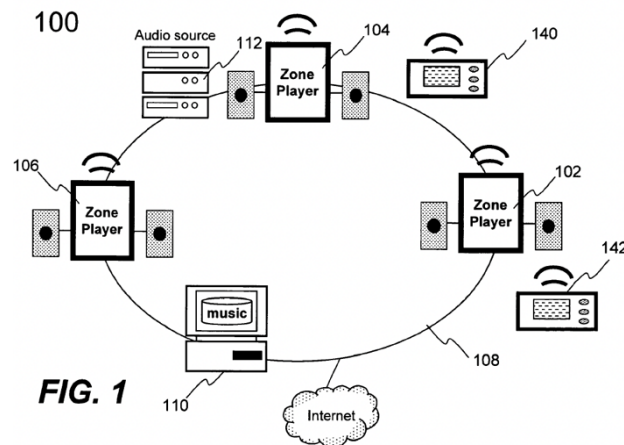


23
24
25 **FIG. 7**

26 ⁷ The underlying premise of Google’s interpretation here appears to be that the phrase
27 “configured to play back media *individually*” means that outputting an audio signal to an external
28 speaker would not be covered, but as explained above, that is not how a POSITA would interpret
the phrase “individually” in this context.

See also, e.g., '885 Patent at 4:44-5:2, 5:21-6:27, 6:39-43.

168. The specification of the '885 Patent also discloses that a “zone player” can play back audio by either processing and outputting audio in the form of sound waves from built-in speakers or processing and outputting an audio signal to connected, external speakers. For example, as shown below in Figure 1 of the '885 Patent, “zone players” 102, 104, and 106 are each connected to an external pair of speakers, which establishes that a zone player can play back audio by outputting an audio signal to connected, external speakers.



169. Thus, in the context of the intrinsic evidence, a POSITA would understand this “standalone mode” limitation to require the “first zone player” to be *operating in a mode for individual playback* (as opposed to grouped playback) but not to require the “first zone player” to be engaging in active playback or to be outputting audio in the form of sound from built-in speakers.

2. “Has Been Added”

170. As set forth above, limitations 1.6-1.7 of the '885 Patent each include the following claim language:

receiving, from a network device over a data network, a [given] indication that the first zone player *has been added* to a [given] zone scene

171. Google appears to be interpreting the phrase “the first zone player *has been added* to a [given] zone scene” in this clause to require that the “first zone player” *has already previously joined itself* to the “zone scene,” and is then relying on this interpretation to argue that claim 1

1 do not appear to be any other claim construction issues that are specifically related to claim
2 limitation 1.9.

3 271. In my opinion, each Accused Google Player is programmed with the functional
4 capability required by claim limitation 1.9.

5 272. For instance, after a speaker group is selected for launch at a Google Controller, the
6 Google Controller will send a message over a Wi-Fi network to at least one of the Accused Google
7 Players in the selected speaker group that instructs the at least one Accused Google Player to begin
8 operating in accordance with the selected speaker group. Such a message for initiating a launch
9 of a speaker group will be sent by a Google Controller in response to a selection of a speaker group
10 by a user in any of various Cast-enabled apps, including but not limited to the Google Home app,
11 the YouTube Music app, the Google Play Music app, and the Spotify app. Google typically refers
12 to this message as a “launch” message, but the actual name of the message may vary depending
13 on the Cast-enabled app via which the speaker group is selected for launch. *See, e.g.*, Google’s
14 Third Suppl. Resp. to Sonos’s Interrog. No. 13 at 9-10 (referring to message sent by a Google
15 Controller to initiate a launch of a speaker group as a “launch request”); 5/10/2022 K. MacKay
16 Dep. Tr. at 68:12-72:20 (referring to the message sent by a Google Controller running a Cast-
17 enabled app to initiate a launch of a speaker group as a “launch message”), 209:20-210:18
18 (referring to the message sent by a Google Controller running a Cast-enabled app to initiate a
19 launch of a speaker group as a “launch command”), 238:21-243:17 (describing a scenario where
20 the message sent by a Google Controller to “cause the launch of a speaker group” is a “set playback
21 devices” message that “indicate[s] a transfer to a group”). Further, the Google Controller typically
22 sends this message for initiating a launch of a speaker group to the “leader” of the selected speaker
23 group, but in some scenarios, the Google Controller could alternatively send this message to a
24 “follower” of the selected speaker group. *See, e.g.*, Google’s Third Suppl. Resp. to Sonos’s
25 Interrog. No. 13 at 9-10 (stating that “[a] launch request is one of the messages that a leader may
26 receive at the time that a Cast session is launched with a group”); 5/10/2022 K. MacKay Dep. Tr.
27 at 212:1-213:13 (testifying that a “launch command” is “typically” sent over a “local network” to
28 the “leader” but there may be “edge cases” where it could be sent to another group member),

1 238:21-243:17 (describing a scenario where Google Controller initiates a launch of a speaker
2 group by sending a “set playback devices” message that “indicate[s] a transfer to a group” to a
3 “source device running a receiver application,” which could either be a leader or a follower of the
4 speaker group to be launched).

5 273. Correspondingly, in order to facilitate this group launch functionality, each
6 Accused Google Player is programmed with the functional capability to receive such a message
7 from a Google Controller over a Wi-Fi network that instructs the Accused Google Player to begin
8 operating in accordance with a selected one of multiple different speaker groups that include the
9 Accused Google Player.

10 274. I have already explained above that each Accused Google Player is a “zone player,”
11 each speaker group is a “zone scene” comprising a “predefined grouping of zone players ... that
12 are to be configured for synchronous playback of media when the . . . zone scene is invoked,” a
13 Wi-Fi network is a “data network,” and a Google Controller is a “network device.” Thus, this
14 functional capability of the Accused Google Players satisfies the requirement that the “first zone
15 player” have the functional capability to receive, from the “network device” over the “data
16 network” after “the given one of the first and second zone scenes has been selected for invocation,”
17 “an instruction to operate in accordance with a given one of the first and second zone scenes
18 respectively comprising a given one of the first and second predefined groupings of zone players.”

19 275. Various evidence that I have reviewed during my infringement analysis confirms
20 that each Accused Google Player has the functional capability to receive a message from a Google
21 Controller over a Wi-Fi network that instructs the Accused Google Player to begin operating in
22 accordance with a selected one of multiple different speaker groups that include the Accused
23 Google Player. For instance, in Google’s Third Supplemental Response to Sonos’s Interrogatory
24 No. 13, Google explains that “[a] launch request is one of the messages that a leader may receive
25 at the time that a Cast session is launched with a group,” and that “when a group launch request is
26 received, the leader may send a launch notification to all followers over the TCP control channel”
27 and the “leader” and “follower” may then carry out actions to begin actively operating as part of
28 the launched group. *See, e.g.*, Google’s Third Suppl. Resp. to Sonos’s Interrog. No. 13 at 9-10.